

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/998,704	SLUIMAN, HARM	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jack M. Choules	2167	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Interview conducted 23 June 2006.
2. ☒ The allowed claim(s) is/are 1-5, 7-12 and 20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date <u>200606 27</u></li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
|---|--|

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with John Rogitz on 23 June 2006. The interview is considered fully responsive to the outstanding office action.

The application has been amended as follows:

Claims 1, 4, 7-12 and 20 have been amended, claims 2, 3, and 5 remain as previously presented and claims 16-19 having been canceled by the current amendment, claims 6, 13-15 and 21-22 were canceled in previous amendments. Claims 1-5, 7-12 and 20 remain in effect and are allowed.

Starting on the following page is a full text list of the claims remaining in the application. The current amendment is shown by striking through deleted text and underlining added text.

Claim 1 (currently amended) A computer implementing a schema for storing, on a computer readable storage medium, meta data that describes at least one relational database in a plurality of databases comprising:

at least one abstract class for defining at least one data type of at least one member, said abstract class including:

at least one property for indicating at least one generic Structured Query Language data type for said member; and

at least one property for indicating at least one database-specific data type name for said member, the database-specific data type name being an internal name for a specific database domain from among the plurality of databases; and

~~at least one method for constructing~~ wherein the computer constructs at least one object instantiated from at least one class derived from said abstract class, the object being used by the computer for query execution.

Claim 2. (previously presented) The computer of claim 1, wherein said abstract class is a first abstract class, further comprising a second abstract class for describing a user defined data type, said second abstract class derived from said first abstract class, said second abstract class including:

at least one property for indicating whether an object of at least one class derived from said second abstract class is instantiable; and

at least one property for indicating whether said class derived from said second abstract class is final.

Claim 3. (previously presented) The computer of claim 1 wherein said abstract class further comprises at least one property for indicating at least one default value for said type of said member.

Claim 4. (currently amended) The ~~schema~~ computer of claim 1 ~~further comprising wherein the schema includes~~ at least one property for indicating at least one mapping of said database-specific data type name to at least one Java Database Connectivity data type.

Claim 5. (previously presented) The computer of claim 1 where said schema is described using the Unified Modeling Language.

Claim 6 (canceled).

Claim 7. (currently amended) A computer using a database catalog for data retrieval, the computer accessing a computer readable storage medium containing comprising:

at least one object of at least one class derived from at least one abstract class for defining at least one data type of at least one member, said abstract class including:

at least one property for indicating at least one generic Structured Query Language data type for said member;

at least one property for indicating at least one database-specific data type name for said member, the database-specific data type name being an internal name for a specific database domain from among a plurality of databases; and

the computer ~~at least one method for~~ constructing at least one object instantiated from at least one class derived from said abstract class.

Claim 8. (currently amended) A computer readable medium holding a database catalog with meta data stored in at least one storage system that is an implementation of the schema of claim 1.

Claim 9. (currently amended) A computer readable medium holding a tool for creating and editing databases including means for storing meta data in a storage system that is an implementation of the schema of claim 1.

Claim 10. (currently amended) A computer readable medium holding a program for creating at least one database comprising storing meta data relating to the database in at least one meta data store according to the schema of claim 1.

Claim 11. (currently amended) A computer executing an object-oriented description of at least one relational database in a plurality of databases comprising:

at least one object for describing at least one type of at least one member in said relational database, said object instantiated from at least one class derived from at least one abstract class for defining at least one data type of at least one member, said abstract class including:

at least one property for indicating at least one generic Structured Query Language data type for said member;

at least one property for indicating at least one database-specific data type name for said member, the database-specific data type name being an internal name for a specific database domain from among the plurality of databases;

~~at least one method~~ means for constructing at least one object instantiated from at least one class derived from said abstract class.

Claim 12. (currently amended) A computer containing at least one object-oriented description of a relational database, said object-oriented description comprising:

at least one object for describing a type of a member in said relational database, said object instantiated from a class derived from at least one abstract class for defining a data type of a member, said abstract class including:

a property for indicating a generic Structured Query Language data type for said member;

a property for indicating a database-specific data type name for said member, the database-specific data type name being an internal name for a specific database domain from among a plurality of databases;  
and

~~a method~~ logic for constructing at least one object instantiated from a class derived from said abstract class.

Claims 13-19 (cancelled).

Claim 20. (currently amended) A computer readable medium storing an object-oriented programming language implementation of a schema for storing meta data that describes a relational database comprising:

at least one abstract class for defining a data type of a member, said abstract class including:

a property for indicating a generic Structured Query Language data type for said member;

Art Unit: 2167

a property for indicating a database-specific data type name for said member, the database-specific data type name being an internal name for a specific database domain from among a plurality of databases;  
and

~~a method for~~ the computer constructing at least one object instantiated from a class derived from said abstract class.

21, 22 (canceled).



The following is an examiner's statement of reasons for allowance: While the prior art of record and in particular Bergamaschi et al. details a system with some of the elements of the claims (see previous office actions for a more particular description of the elements included in Bergamaschi et al). Bergamaschi is directed to a single database system. Thus the meta data of Bergamaschi et al is not "meta data that describes at least one relational database in a plurality of databases". This is significant as although Bergamaschi et al details data types in his database the reference does not show or suggest "at least one property for indicating at least one generic Structured Query Language data type for said member; and at least one property for indicating at least one database-specific data type name for said member, the database-specific data type name being an internal name for a specific database domain from among the plurality of databases" as set forth in claim 1. Claims 2-5 and 8-10 incorporate the elements of claim 1 from which they depend so are considered patently distinct over the art of record for the same reason. Claims 7, 11, 12 and 20 have similar limitations and are novel and non-obvious for the same reasons.

The claims are statutory as they are machines methods and products which provide the useful, concrete, and tangible result of constructing "at least one object instantiated from at least one class derived from said abstract class" and claims such as claim 1 further including "the object being used by the computer for query execution." The meta data describes a data structure of an

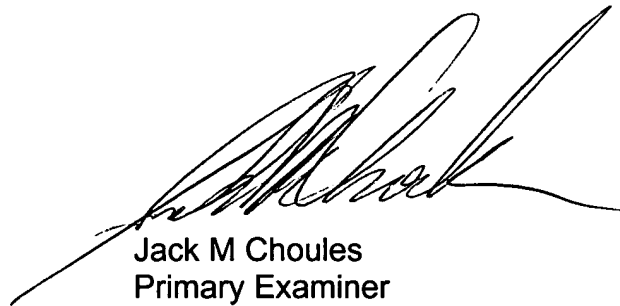
abstract class which elements consisting of properties indicating specific data types these abstract classes are used to derive a class used to instantiate a object which thus includes the data structure described by the meta data, as the element make up data stored on a media which functions to produce data structure the elements of the claim are functional data and data structures and thus statutory and give full weight when considering the patentability of the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack M. Choules whose telephone number is (571) 272-4109. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jack M Choules  
Primary Examiner  
Art Unit 2167

30 June 2006